

# Packaging Machinery Manufacturing: 2002

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## 2002 Economic Census

*Manufacturing*

Industry Series



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U.S. Department of Commerce  
Economics and Statistics Administration  
U.S. CENSUS BUREAU



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-- Not applicable for this report.

**Table 1. Historical Statistics for the Industry: 2002 and Earlier Years**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry and year <sup>1</sup>	Com- panies <sup>2</sup>	All estab- lish- ments <sup>3</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expendi- tures (\$1,000)	
			Number <sup>4</sup>	Payroll (\$1,000)	Number <sup>4</sup>	Hours (1,000)	Wages (\$1,000)					
333993, Packaging machinery manufacturing .....	2002..	624	660	24 038	1 141 212	11 756	23 723	452 181	2 341 024	1 752 131	4 107 768	'80 087
	2001..	N	N	27 923	1 207 904	14 685	30 087	508 134	2 260 534	1 894 370	4 229 635	73 657
	2000..	N	N	29 259	1 263 422	16 071	32 958	533 019	2 528 663	2 089 996	4 615 645	87 447
	1999..	N	N	31 000	1 294 363	16 315	33 742	536 949	2 488 428	2 220 050	4 689 757	92 101
	1998..	N	N	32 385	1 307 899	17 184	34 606	547 867	2 730 693	2 171 446	4 928 283	113 234
	1997..	644	687	32 109	1 278 345	17 280	34 867	552 062	2 706 010	2 116 512	4 900 477	122 256

<sup>1</sup>Statistics presented for years ending in 2 and 7 are census data. Interim census years are derived in a representative sample of manufacturing establishments canvassed in the Annual Survey of Manufactures (ASM).

<sup>2</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>3</sup>Includes establishments with payroll at any time during the year.

<sup>4</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 2. Industry Statistics for Selected States: 2002**

[States that are a disclosure or with less than 100 employees are not shown. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographical definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

Industry and geographic area	E <sup>1</sup>	All establishments <sup>2</sup>		All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
		Total	With 20 employees or more	Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
<b>333993, Packaging machinery manufacturing</b>												
United States .....	1	660	258	24 038	1 141 212	11 756	23 723	452 181	2 341 024	1 752 131	4 107 768	'80 087
Alabama .....	—	5	3	191	7 865	110	215	4 184	32 569	14 935	46 895	'351
Arkansas .....	4	8	4	183	7 831	141	207	5 290	11 295	9 714	20 854	'375
California .....	3	88	25	2 529	118 131	1 280	2 633	48 943	211 131	186 257	402 152	'7 622
Colorado .....	—	8	3	250	9 669	151	329	4 476	10 322	15 180	26 948	'641
Connecticut .....	6	12	3	265	14 296	135	284	6 032	20 886	20 598	41 508	'760
Florida .....	1	33	16	872	39 234	447	922	17 015	67 000	51 131	119 307	'2 886
Georgia .....	—	23	6	654	28 268	360	741	11 642	180 546	68 178	248 965	'930
Illinois .....	1	50	19	2 344	132 747	957	1 980	40 558	297 863	224 440	510 906	'9 482
Indiana .....	1	10	3	214	10 573	149	327	7 160	16 830	10 424	26 798	'1 122
Kentucky .....	—	8	4	904	51 294	494	1 036	23 521	91 330	72 506	165 268	'3 613
Massachusetts .....	5	16	6	488	24 919	284	561	10 008	45 106	24 606	69 103	'2 565
Michigan .....	—	25	9	625	33 489	297	596	13 380	50 844	53 788	103 020	'1 670
Minnesota .....	2	36	19	2 417	101 010	1 254	2 648	47 255	167 202	131 393	299 931	'8 324
Missouri .....	—	15	4	366	20 675	120	206	3 817	55 788	35 935	88 948	'918
New Jersey .....	2	44	19	1 030	52 963	504	982	22 674	100 188	57 366	158 270	'1 746
New York .....	1	35	10	688	31 193	379	621	13 769	56 040	42 914	108 199	'1 073
North Carolina .....	1	21	5	378	20 490	156	320	5 938	56 569	49 622	105 836	'1 571
Ohio .....	—	39	17	2 290	105 820	1 038	2 099	37 643	204 801	196 399	412 844	'15 429
Pennsylvania .....	1	39	18	974	44 556	583	1 128	20 884	75 734	70 233	149 627	'3 483
South Carolina .....	—	7	4	1 221	35 105	327	690	13 459	74 851	49 274	115 007	'1 319
Texas .....	2	19	6	302	13 333	183	384	6 598	24 318	19 540	43 977	'612
Virginia .....	—	10	7	585	27 369	309	630	11 562	53 430	47 662	101 390	'1 203
Washington .....	1	18	10	599	24 614	328	684	11 201	41 617	32 003	74 141	'2 217
Wisconsin .....	3	39	20	1 824	86 655	901	1 742	33 582	200 496	133 587	329 645	'7 017

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C. For geographical definitions, see Appendix D.

**Table 3. Detailed Statistics by Industry: 2002**

[Data based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). For information on confidentiality protection, sampling error, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Item	Value
<b>333993, Packaging machinery manufacturing</b>	
Companies <sup>1</sup> .....	number.. 624
All establishments <sup>2</sup> .....	number.. 660
Establishments with 1 to 19 employees .....	number.. 402
Establishments with 20 to 99 employees .....	number.. 205
Establishments with 100 employees or more .....	number.. 53
All employees <sup>3</sup> .....	number.. 24 038
Total compensation .....	\$1,000.. 1 386 877
Annual payroll .....	\$1,000.. 1 141 212
Total fringe benefits .....	\$1,000.. 245 665
Production workers, average for year .....	number.. 11 756
Production workers on March 12 .....	number.. 11 767
Production workers on May 12 .....	number.. 11 804
Production workers on August 12 .....	number.. 11 731
Production workers on November 12 .....	number.. 11 657
Production worker hours .....	1,000.. 23 723
Production worker wages .....	\$1,000.. 452 181
Total cost of materials .....	\$1,000.. 1 752 131
Materials, parts, containers, packaging, etc., used .....	\$1,000.. 1 444 387
Resales .....	\$1,000.. 224 787
Purchased fuels .....	\$1,000.. 4 581
Purchased electricity .....	\$1,000.. 19 174
Contract work .....	\$1,000.. 59 202
Quantity of electricity purchased for heat and power .....	1,000 kWh.. 289 750
Quantity of electricity generated less sold for heat and power .....	1,000 kWh.. -
Total value of shipments .....	\$1,000.. 4 107 768
Primary products value of shipments .....	\$1,000.. 3 490 711
Secondary products value of shipments .....	\$1,000.. 180 221
Total miscellaneous receipts .....	\$1,000.. 436 836
Value of resales .....	\$1,000.. 274 689
Contract receipts .....	\$1,000.. 17 131
Other miscellaneous receipts .....	\$1,000.. 145 016
Primary products specialization ratio .....	percent.. 95
Value of primary products shipments made in all industries .....	\$1,000.. 3 646 564
Value of primary products shipments made in this industry .....	\$1,000.. 3 490 711
Value of primary products shipments made in other industries .....	\$1,000.. 155 853
Coverage ratio .....	percent.. 96
Value added .....	\$1,000.. 2 341 024
Total inventories, beginning of year .....	\$1,000.. 823 369
Finished goods inventories .....	\$1,000.. 238 090
Work-in-process inventories .....	\$1,000.. 276 282
Materials and supplies inventories .....	\$1,000.. 308 997
Total inventories, end of year .....	\$1,000.. 790 924
Finished goods inventories .....	\$1,000.. 233 975
Work-in-process inventories .....	\$1,000.. 265 784
Materials and supplies inventories .....	\$1,000.. 291 165
Gross value of depreciable assets (acquisition costs) at beginning of year .....	\$1,000.. '1 219 281
Total capital expenditures (new and used) .....	\$1,000.. '80 087
Buildings and other structures (new and used) .....	\$1,000.. '14 349
Machinery and equipment (new and used) .....	\$1,000.. '65 738
Automobiles, trucks, etc., for highway use .....	\$1,000.. '4 977
Computers and peripheral data processing equipment .....	\$1,000.. '13 556
All other expenditures for machinery and equipment .....	\$1,000.. '47 205
Total retirements .....	\$1,000.. '74 557
Gross value of depreciable assets at end of year .....	\$1,000.. '1 224 811
Depreciation charges during year .....	\$1,000.. '80 246
Total rental payments .....	\$1,000.. 62 287
Buildings and other structures .....	\$1,000.. 41 221
Machinery and equipment .....	\$1,000.. 21 066
Total other expenses <sup>4</sup> .....	\$1,000.. 401 991
Response coverage ratio <sup>5</sup> .....	percent.. 84
Repair and maintenance services of buildings and/or machinery <sup>4</sup> .....	\$1,000.. 15 251
Communications services <sup>4</sup> .....	\$1,000.. 16 206
Legal services <sup>4</sup> .....	\$1,000.. 9 178
Accounting, auditing, and bookkeeping services <sup>4</sup> .....	\$1,000.. 7 998
Advertising and promotional services <sup>4</sup> .....	\$1,000.. 18 798
Expensed computer hardware and supplies and purchased computer services <sup>4</sup> .....	\$1,000.. 9 081
Refuse removal (including hazardous waste) services <sup>4</sup> .....	\$1,000.. 1 813
Management consulting and administrative services <sup>4</sup> .....	\$1,000.. 7 911
Taxes and license fees <sup>4</sup> .....	\$1,000.. 13 378
All other expenses <sup>4</sup> .....	\$1,000.. 302 378

<sup>1</sup>For the census, a company is defined as a business organization consisting of one establishment or more under common ownership or control.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Based on 2002 Annual Survey of Manufactures (ASM) sample data.

<sup>5</sup>A response coverage ratio is derived for this item by calculating the ratio of the weighted employment (establishment data multiplied by sample weight) for those Annual Survey of Manufactures (ASM) establishments that reported to the weighted total employment for all ASM establishments classified in this industry.

Note 1: The amounts shown for other expenses reflect only those services that establishments purchase from other companies.

Note 2: The data in this table are based on the 2002 Economic Census and the 2002 Annual Survey of Manufactures (ASM). To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain sampling errors and nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 4. Industry Statistics by Employment Size: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Employment size class	E <sup>1</sup>	All establishments <sup>2</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>3</sup>	Payroll (\$1,000)	Number <sup>3</sup>	Hours (1,000)	Wages (\$1,000)				
333993, Packaging machinery manufacturing											
All establishments .....	1	660	24 038	1 141 212	11 756	23 723	452 181	2 341 024	1 752 131	4 107 768	'80 087
Establishments with—											
1 to 4 employees .....	8	229	493	22 810	267	484	9 247	38 680	31 371	69 586	'1 141
5 to 9 employees .....	5	84	571	27 966	325	600	12 363	50 492	41 559	92 634	'1 366
10 to 19 employees .....	3	89	1 226	58 529	681	1 393	25 913	103 336	83 264	189 742	'6 804
20 to 49 employees .....	1	136	4 314	204 192	2 460	4 948	94 999	395 212	281 477	672 147	'12 747
50 to 99 employees .....	—	69	4 857	228 510	2 571	5 170	95 537	490 324	361 098	857 194	'14 485
100 to 249 employees .....	1	39	6 355	304 028	3 280	6 726	123 933	669 212	502 130	1 182 576	'29 683
250 to 499 employees .....	3	10	3 499	162 201	1 705	3 417	67 676	314 684	234 196	551 456	'9 931
500 to 999 employees .....	—	4	2 723	132 976	467	985	22 513	279 084	217 036	492 433	3 930
1,000 to 2,499 employees .....	—	—	—	—	—	—	—	—	—	—	—
2,500 employees or more .....	—	—	—	—	—	—	—	—	—	—	—
Administrative records <sup>4</sup> .....	9	261	763	36 657	401	766	14 732	58 845	49 101	107 675	'1 731

<sup>1</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. This technique was also used for a small number of other establishments whose reports were not received at the time data were tabulated. The following symbols are shown where estimated data account for 10 percent or more of the figures shown: 1–10 to 19 percent; 2–20 to 29 percent; 3–30 to 39 percent; 4–40 to 49 percent; 5–50 to 59 percent; 6–60 to 69 percent; 7–70 to 79 percent; 8–80 to 89 percent; 9–90 percent or more.

<sup>2</sup>Includes establishments with payroll at any time during the year.

<sup>3</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

<sup>4</sup>Some payroll and sales data for small single-establishment companies with up to 20 employees (cutoff varied by industry) were obtained from administrative records of other government agencies rather than from census report forms. These data were then used in conjunction with industry averages to estimate statistics for these small establishments. Data are also included in respective size classes shown.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 5. Industry Statistics by Primary Product Class Specialization: 2002**

[Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note at end of table. For meaning of abbreviations and symbols, see introductory text]

Industry or product class code	Industry or primary product class	All establishments <sup>1</sup>	All employees		Production workers			Value added (\$1,000)	Total cost of materials (\$1,000)	Total value of shipments (\$1,000)	Total capital expenditures (\$1,000)
			Number <sup>2</sup>	Payroll (\$1,000)	Number <sup>2</sup>	Hours (1,000)	Wages (\$1,000)				
333993	Packaging machinery manufacturing ..	660	24 038	1 141 212	11 756	23 723	452 181	2 341 024	1 752 131	4 107 768	'80 087
3339931	Packing, packaging, and bottling machinery (except parts) .....	369	20 068	950 744	10 299	20 860	390 136	1 964 355	1 453 959	3 442 077	'71 317
3339935	Parts for packing, packaging, and bottling machinery .....	29	2 935	138 352	946	1 884	43 469	291 582	212 877	496 584	'6 131

<sup>1</sup>Includes establishments with payroll at any time during the year.

<sup>2</sup>Number of employees figures represent average number of production workers for pay period that includes the 12th of March, May, August, and November plus other employees for payroll period that includes the 12th of March.

Note: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6a. Products Statistics: 2002 and 1997**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333993	Packaging machinery manufacturing .....	2002.. N 1997.. N	X X	X X	3 646 564 4 339 309
3339931	Packing, packaging, and bottling machinery (except parts) .....	2002.. N 1997.. N	X X	X X	2 910 427 3 515 923
33399311	Cartoning, multipacking, and leaflet-coupon placing machinery (except parts) .....	2002.. N 1997.. N	X X	X X	262 579 330 918
3339931103	Cartoning, multipacking, and leaflet-coupon placing machinery (except parts) .....	2002.. 41 1997.. 40	X X	X X	262 579 330 918
33399312	Thermoforming, blister, and skin machinery, including carded display machinery (except parts) .....	2002.. N 1997.. N	X X	X X	22 092 D
3339931207	Thermoforming, blister, and skin machinery, including carded display machinery (except parts) .....	2002.. 10 1997.. 3	X X	X X	22 092 D
33399313	Bagging machines (including pre-form opening, filling, and closing, modified atmosphere laminating, and form-fill-seal machines) (except parts) .....	2002.. N 1997.. N	X X	X X	255 765 325 427
3339931311	Bag (pre-form) opening, filling, and closing machinery and systems (except parts) .....	2002.. 29 1997.. 29	X X	X X	114 053 108 876
3339931315	Vacuum, gas, and other modified atmosphere laminating and bagging machines (except parts) .....	2002.. 11 1997.. 8	X X	X X	30 052 17 335
3339931319	Horizontal bag and pouch form, fill, and seal machinery (performs all three functions) .....	2002.. 20 1997.. 24	X X	X X	50 736 106 400
3339931321	Vertical bag and pouch form, fill, and seal machinery (performs all three functions) .....	2002.. 17 1997.. 22	X X	X X	60 924 92 816
33399314	Machinery for bottling, canning, cleaning, drying bottles and containers, and adhesive devices for packing, packaging, and bottling (except parts) .....	2002.. N 1997.. N	X X	X X	500 386 556 864
3339931426	Adhesive devices for packing, packaging, and bottling machinery (hot melt and cold glue) (except parts) .....	2002.. 13 1997.. 9	X X	X X	D D
3339931433	Machinery for cleaning and drying bottles and other containers (except parts) .....	2002.. 3 1997.. 10	X X	X X	8 781 17 170
3339931437	Bottling and canning machinery (including fillers, all types of closers, and accessory equipment) (except parts) .....	2002.. 38 1997.. 33	X X	X X	D D
33399315	Liquids and dry viscous products filling machinery, including by count machinery (except bags and parts) .....	2002.. N 1997.. N	X X	X X	228 554 313 962
3339931544	Dry products filling machinery (free and nonfree flowing), including by count machinery (except bags and parts) .....	2002.. 26 1997.. 27	X X	X X	94 798 117 645
3339931545	Liquids and viscous products filling machinery (including very heavy liquids, slurries, and pumpable semisolids) (except parts) .....	2002.. 34 1997.. 29	X X	X X	133 756 196 317
33399316	Glass and plastics container and can capping, sealing, and lidding machinery (except filling, bottling, and canning machinery, and parts) .....	2002.. N 1997.. N	X X	X X	76 810 D
3339931651	Glass and plastics container and can capping, sealing, and lidding machinery (except filling, bottling, and canning machinery, and parts) .....	2002.. 16 1997.. 16	X X	X X	76 810 D
33399317	Labeling machinery (all types of applications and methods) (except parts) .....	2002.. N 1997.. N	X X	X X	197 237 242 816
3339931755	Labeling machinery (all types of applications and methods) (except parts) .....	2002.. 46 1997.. 43	X X	X X	197 237 242 816
33399318	Coding, dating, imprinting, jet printing, marking, and stamping machinery (except parts) .....	2002.. N 1997.. N	X X	X X	263 674 205 950
3339931859	Coding, dating, imprinting, jet printing, marking, and stamping machinery (except parts) .....	2002.. 18 1997.. 19	X X	X X	263 674 205 950
33399319	Corrugated and solid fibre case and tray forming, loading, and sealing machinery (except parts) .....	2002.. N 1997.. N	X X	X X	202 008 219 311
3339931963	Corrugated and solid fibre case and tray forming, loading, and sealing machinery (except parts) .....	2002.. 34 1997.. 29	X X	X X	202 008 219 311
3339931A	Accumulating, collating, feeding, and unscrambling machinery, including testing, inspecting, detecting, checkweighing, and other quality control devices (except parts) .....	2002.. N 1997.. N	X X	X X	168 212 182 820
3339931A67	Accumulating, collating, feeding, and unscrambling machinery (except parts) .....	2002.. 39 1997.. 26	X X	X X	128 822 61 348
3339931A71	Testing, inspecting, detecting, checkweighing, and other quality control devices (except parts) .....	2002.. 28 1997.. 13	X X	X X	39 390 121 472
3339931B	Paper, film, and foil wrapping machines, all types (except parts) .....	2002.. N 1997.. N	X X	X X	248 060 328 503
3339931B75	Paper, film, and foil wrapping machines, all types (except shrink and stretch film equipment, and parts) .....	2002.. 14 1997.. 14	X X	X X	48 837 104 635
3339931B79	Shrink and stretch film overwrapping, banding, and bundling machinery (except pallet unitizing and parts) .....	2002.. 29	X	X	162 138

See footnotes at end of table.



Table 6a. **Products Statistics: 2002 and 1997—Con.**

[Includes quantity and value of products of this industry produced by (1) establishments classified in this industry (primary) and (2) establishments classified in other industries (secondary). Transfers of products of this industry from one establishment of a company to another establishment of the same company (interplant transfers) are also included. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Product code	Product	Number of companies with shipments of \$100,000 or more	Quantity of production for all purposes	Product shipments	
				Quantity	Value (\$1,000)
333993	Packaging machinery manufacturing—Con.				
3339931	Packing, packaging, and bottling machinery (except parts)—Con.				
3339931B	Paper, film, and foil wrapping machines, all types (except parts)—Con.				
3339931B79	Shrink and stretch film overwrapping, banding, and bundling machinery (except pallet unitizing and parts)—Con.				
	1997..	31	X	X	195 119
3339931B83	Palletizing, depalletizing, and pallet unitizing machinery with stretch film, adhesive, and strapping (except parts) .....	2002..	X	X	37 085
	1997..	8	X	X	28 749
3339931C	All other miscellaneous packing, packaging, and bottling machinery or systems and combination of equipment (except parts) .....	2002..	X	X	336 499
	1997..	N	X	X	368 200
3339931C99	All other miscellaneous packing, packaging, and bottling machinery or systems and combination of equipment (except parts) .....	2002..	X	X	336 499
	1997..	72	X	X	368 200
3339931Y	Packing, packaging, and bottling machinery (except parts), nsk .....	2002..	X	X	148 551
	1997..	N	X	X	370 218
3339931YVV	Packing, packaging, and bottling machinery (except parts), nsk .....	2002..	X	X	148 551
	1997..	N	X	X	370 218
3339935	Parts for packing, packaging, and bottling machinery .....	2002..	X	X	651 644
	1997..	N	X	X	566 412
33399351	Parts for packing, packaging, and bottling machinery .....	2002..	X	X	651 644
	1997..	N	X	X	566 412
3339935100	Parts for packing, packaging, and bottling machinery .....	2002..	X	X	651 644
	1997..	167	X	X	566 412
333993W	Packaging machinery manufacturing, nsk, total .....	2002..	X	X	84 493
	1997..	N	X	X	256 974
333993WY	Packaging machinery manufacturing, nsk, total .....	2002..	X	X	84 493
	1997..	N	X	X	256 974
333993WYWW	Packaging machinery manufacturing, nsk, for nonadministrative-record establishments .....	2002..	X	X	9 529
	1997..	N	X	X	135 104
333993WYWY	Packaging machinery manufacturing, nsk, for administrative-record establishments .....	2002..	X	X	74 964
	1997..	N	X	X	121 870

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p—10 to 19 percent estimated; q—20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.

**Table 6b. Product Class Shipments for Selected States: 2002 and 1997**

[Product classes covered are those that are economically significant and whose production is geographically dispersed, provided dispersion is not approximated by data in Table 2. Also, product classes are not shown if they are miscellaneous or "not specified by kind" classes. Statistics for some states are withheld because they are either less than \$2 million in product class shipments or they disclose data for individual companies in 2002. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, explanation of terms, and geographic definitions, see note at end of table. For information on geographic areas followed by \*, see Appendix D. For meaning of abbreviations and symbols, see introductory text]

NAICS product class code	Product class and geographic area	Value of product shipments (\$1,000)
3339931	Packing, packaging, and bottling machinery (except parts)	
	United States .....	2 910 427
	..... 2002 ..	3 515 923
	..... 1997 ..	
	Alabama .....	41 248
	..... 2002 ..	18 354
	..... 1997 ..	
	Arkansas .....	18 908
	..... 2002 ..	7 629
	..... 1997 ..	
	California .....	235 639
	..... 2002 ..	346 824
	..... 1997 ..	
	Colorado .....	27 551
	..... 2002 ..	38 691
	..... 1997 ..	
	Connecticut .....	39 319
	..... 2002 ..	18 741
	..... 1997 ..	
	Florida .....	83 772
	..... 2002 ..	165 474
	..... 1997 ..	
	Georgia .....	226 407
	..... 2002 ..	181 846
	..... 1997 ..	
	Illinois .....	304 245
	..... 2002 ..	481 987
	..... 1997 ..	
	Indiana .....	17 228
	..... 2002 ..	21 091
	..... 1997 ..	
	Kentucky .....	112 616
	..... 2002 ..	135 114
	..... 1997 ..	
	Massachusetts .....	39 364
	..... 2002 ..	55 675
	..... 1997 ..	
	Michigan .....	72 143
	..... 2002 ..	96 418
	..... 1997 ..	
	Minnesota .....	241 238
	..... 2002 ..	204 756
	..... 1997 ..	
	Missouri .....	60 337
	..... 2002 ..	48 088
	..... 1997 ..	
	New Jersey .....	107 966
	..... 2002 ..	112 706
	..... 1997 ..	
	New York .....	73 631
	..... 2002 ..	97 736
	..... 1997 ..	
	North Carolina .....	83 757
	..... 2002 ..	37 684
	..... 1997 ..	
	Ohio .....	301 976
	..... 2002 ..	421 518
	..... 1997 ..	
	Pennsylvania .....	101 429
	..... 2002 ..	208 631
	..... 1997 ..	
	South Carolina .....	51 490
	..... 2002 ..	73 648
	..... 1997 ..	
	Texas .....	37 589
	..... 2002 ..	57 579
	..... 1997 ..	
	Virginia .....	61 892
	..... 2002 ..	58 837
	..... 1997 ..	
	Washington .....	70 059
	..... 2002 ..	78 533
	..... 1997 ..	
	Wisconsin .....	209 335
	..... 2002 ..	321 049
	..... 1997 ..	
3339935	Parts for packing, packaging, and bottling machinery	
	United States .....	651 644
	..... 2002 ..	566 412
	..... 1997 ..	
	California .....	79 990
	..... 2002 ..	59 541
	..... 1997 ..	
	Connecticut .....	10 695
	..... 2002 ..	9 134
	..... 1997 ..	
	Florida .....	16 516
	..... 2002 ..	25 369
	..... 1997 ..	
	Georgia .....	11 386
	..... 2002 ..	12 323
	..... 1997 ..	
	Illinois .....	148 933
	..... 2002 ..	64 921
	..... 1997 ..	
	Michigan .....	9 188
	..... 2002 ..	5 503
	..... 1997 ..	
	Minnesota .....	13 557
	..... 2002 ..	21 218
	..... 1997 ..	
	New Jersey .....	30 287
	..... 2002 ..	13 119
	..... 1997 ..	
	New York .....	17 927
	..... 2002 ..	23 190
	..... 1997 ..	
	Ohio .....	42 819
	..... 2002 ..	11 176
	..... 1997 ..	
	Pennsylvania .....	17 977
	..... 2002 ..	31 139
	..... 1997 ..	
	South Carolina .....	43 010
	..... 2002 ..	47 621
	..... 1997 ..	
	Washington .....	9 807
	..... 2002 ..	13 137
	..... 1997 ..	
	Wisconsin .....	82 211
	..... 2002 ..	111 680
	..... 1997 ..	

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**Table 7. Materials Consumed by Kind: 2002 and 1997**

[Includes quantity and cost of materials consumed or put into production by establishments classified only in this industry. Data based on the 2002 Economic Census. For information on confidentiality protection, nonsampling error, and explanation of terms, see note 2 at end of table. For meaning of abbreviations and symbols, see introductory text]

Material code	Material consumed	Quantity	Delivered cost (\$1,000)
333993	Packaging machinery manufacturing		
00900001	Total materials .....2002..	X	1 444 387
	.....1997..	X	1 779 001
33399601	Fluid power pumps, motors, and hydrostatic transmissions (hydraulic and pneumatic) .....2002..	X	9 650
	.....1997..	X	28 573
00190086	Other fluid power products, hydraulic and pneumatic (excluding pumps, motors, and hydrostatic transmissions) .....2002..	X	34 857
	.....1997..	X	75 276
33361200	Mechanical speed changers, gears, and industrial high-speed drives .....2002..	X	27 184
	.....1997..	X	56 715
33299101	Ball and roller bearings (mounted or unmounted) .....2002..	X	21 961
	.....1997..	X	46 321
33361303	Other mechanical power transmission equipment .....2002..	X	18 395
	.....1997..	X	31 708
33200005	Fabricated metal products, including forgings .....2002..	X	129 245
	.....1997..	X	297 167
33151001	Iron and steel castings (rough and semifinished) .....2002..	X	50 831
	.....1997..	X	31 675
33152011	Nonferrous (aluminum, copper, etc.) castings (rough and semifinished) .....2002..	X	6 434
	.....1997..	X	19 413
33120031	Stainless steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	17 033
	.....1997..	X	55 714
33120023	All other steel shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	11 539
	.....1997..	X	42 141
33100038	Aluminum and aluminum-base alloy shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	12 151
	.....1997..	X	N
33100077	Other nonferrous shapes and forms (excluding castings, forgings, and fabricated metal products) .....2002..	X	4 589
	.....1997..	X	54 082
33531407	Relays and industrial controls (including programmable controllers) for drives, clutches, brakes, motors, etc. ....2002..	X	54 303
	.....1997..	X	182 261
33530000	Transformers (excluding electronic-type) and other electric power transmission and distribution equipment .....2002..	X	11 039
	.....1997..	X	30 393
33531201	Electric motors and generators .....2002..	X	33 382
	.....1997..	X	84 577
33399309	Purchased packaging machinery devices for incorporation into complete finished products .....2002..	X	59 179
	.....1997..	X	198 813
00190096	Other purchased devices for incorporation into complete finished products (excluding packaging machinery devices) .....2002..	X	20 685
	.....1997..	X	30 400
00970099	All other materials and components, parts, containers, and supplies .....2002..	X	430 898
	.....1997..	X	384 859
00971000	Materials, ingredients, containers, and supplies, nsk .....2002..	X	491 032
	.....1997..	X	128 913

Note 1: For some establishments, data have been estimated from central unit values that are based on quantity-value relationships of reported data. The following symbols are used when percentage of each quantity figure estimated in this manner equals or exceeds 10 percent of published figure: p-10 to 19 percent estimated; q-20 to 29 percent estimated. If 30 percent or more is estimated, figure is replaced by S.

Note 2: The data in this table are based on the 2002 Economic Census. To maintain confidentiality, the Census Bureau suppresses data to protect the identity of any business or individual. The census results in this table contain nonsampling errors. Data users who create their own estimates using data from American FactFinder tables should cite the Census Bureau as the source of the original data only. For explanation of terms, see Appendix A. For full technical documentation, see Appendix C.